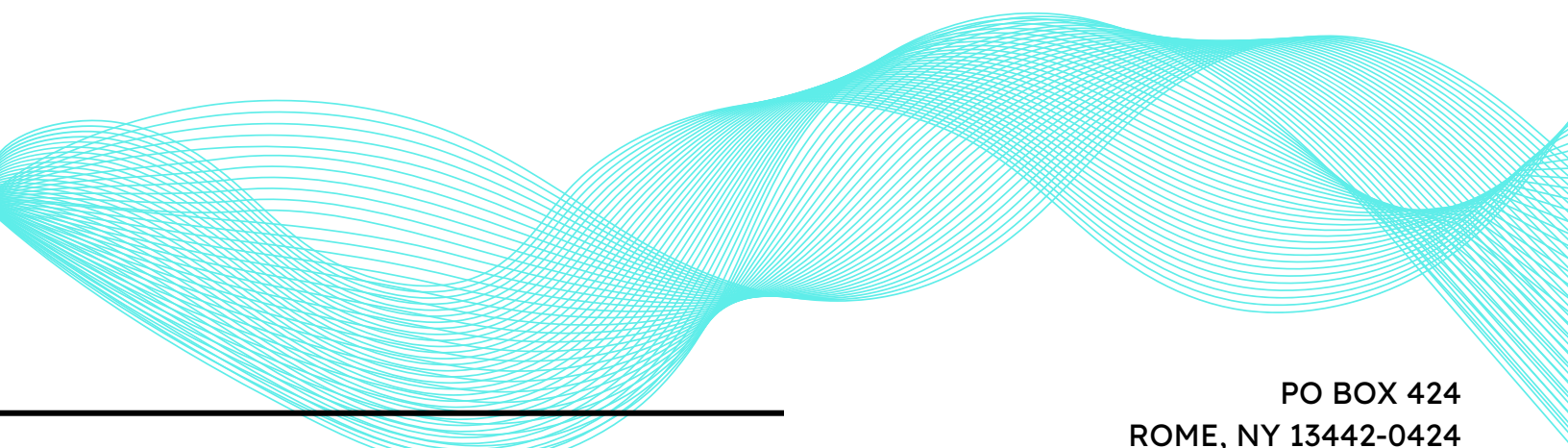


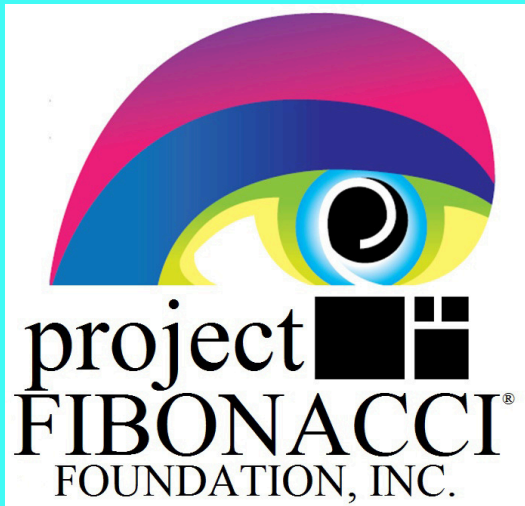
6th Annual Project Fibonacci® STEAM Leadership Conference

2024 Summary

USING THE ARTS TO GROW THE STEM WORKFORCE



PO BOX 424
ROME, NY 13442-0424



OUR MISSION

To introduce our youth to a culture of interdisciplinary STEAM learning, teaching them to become creative, independent leaders of community resurgence.

OUR VISION

Enriched STEAM
Communities Driving a
Modern Renaissance

ABOUT:

The Project Fibonacci Foundation, Inc.'s year-round STEAM programs have a positive impact on communities across New York State and beyond. These programs foster innovation, creativity, and leadership in young people, preparing them for successful careers in science, technology, engineering, arts, and mathematics.

The annual STEAM Leadership conference not only provides valuable educational opportunities for attendees, but also supports local businesses and vendors, boosting the economy. Innovation camps held in various school districts across the state have even started drone clubs, which provide students with hands-on experience in emerging technologies.

We also showcase local STEM experts and professionals as workshop presenters and lecturers. By doing so, participants are motivated to excel in STEM fields and encouraged to stay and thrive in their communities.

Our goal is workforce preparedness to support local companies and encourage the next generation of scientists, artists, and leaders to stay in the area and make a positive impact. Additionally, the annual 'Fuel Your Future' College and Career Fair highlights professional and academic opportunities, paving the way for students to achieve their goals and reach their full potential.



2024 CONFERENCE THEME

The 2024 STEAM Leadership Conference focused on the transformative world of Artificial Intelligence (AI) and its multifaceted impact on both society and technology. We engaged in thought-provoking discussions about the growing concerns surrounding "deepfakes," automated bots, and amplification algorithms. Throughout this week, scholars delved into the complexities of AI, exploring both its potential benefits and the challenges it presents. Scholars from all over New York State and beyond gathered to confront the relevant issues while networking, developing new acquaintances, and exploring the academic and professional opportunities our area has to offer. Our goal was to foster a balanced and scholarly examination of AI, encouraging you to critically analyze and address these pressing issues.

"The conference this year has been a joy to attend. The workshops were enjoyable and fascinating as always, the keynote speakers engaging, and the connection & skill building irreplaceable. If possible, I would love the opportunity to work with my team members again next year, as I believe I still have so much more to learn from them. Thank you all so much for making this possible."

-2024 STEAM Scholar



100%

2024 STEAM Scholars had their tuition fully paid for by their schools & through sponsorship organizations

27

Schools sent their students to attend the conference

19

Businesses, schools, & local organizations contributed toward tuition funding

33%

2024 Scholars were returning STEAM Scholars



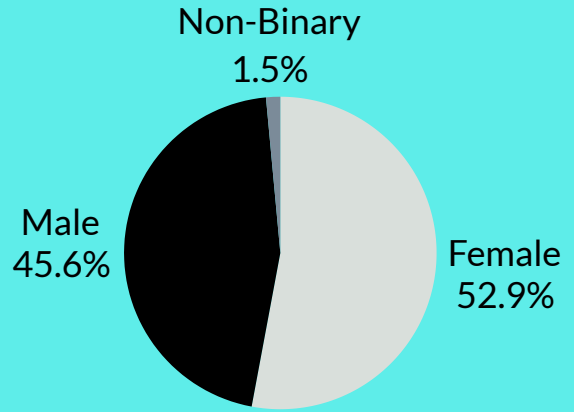
Red Team - Winning Team of the Judge's Choice Award



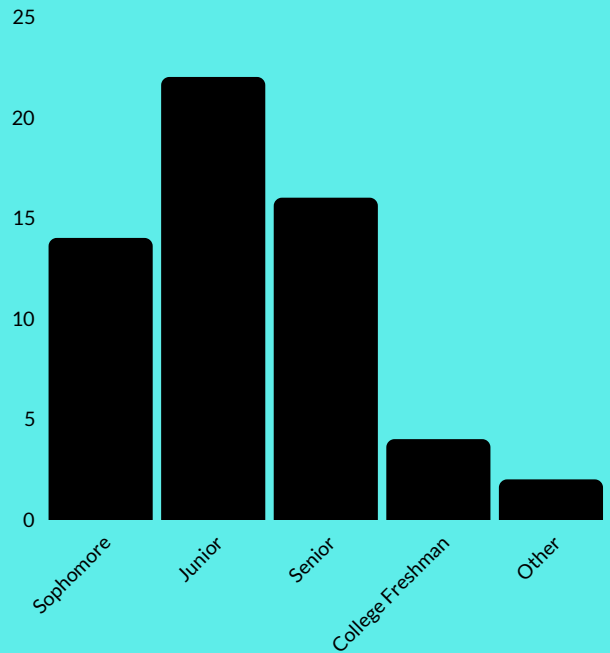
Purple Team - Winning Team of the People's Choice Award

DEMOGRAPHICS

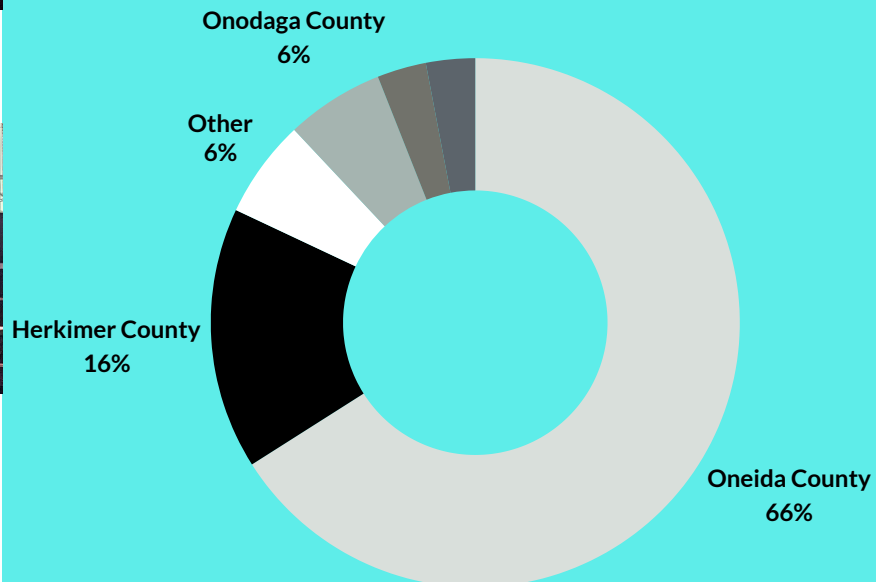
GENDER

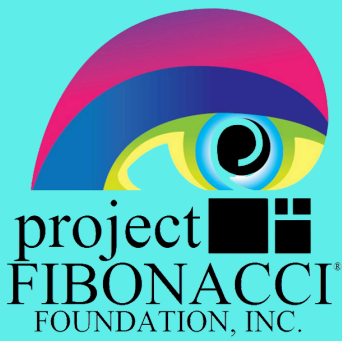


GRADE LEVELS



COUNTIES





SCHOLAR FEEDBACK

65%

Would like to return for
the 2025 STEAM
Leadership Conference



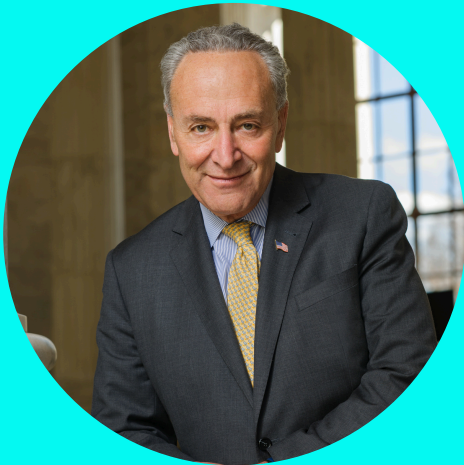
“It was super nice seeing everyone again, looking forward to working on the project with the team, but I worry that we haven’t gotten to talk/plan much with the newer members. Also the catering seems absolutely amazing again this year, none of the dinner was unsafe. It means a lot to not have to worry about the allergy. :)”

“The conference this year has been a joy to attend. The workshops were enjoyable and fascinating as always, the keynote speakers engaging, and the connection & skill building irreplaceable. If possible, I would love the opportunity to work with my team members again next year, as I believe I still have so much more to learn from them. Thank you all so much for making this possible.”

“This week has been one of the best weeks I’ve had in a long time.”

“Thanks for the good memories.”

WELCOME RECEPTION



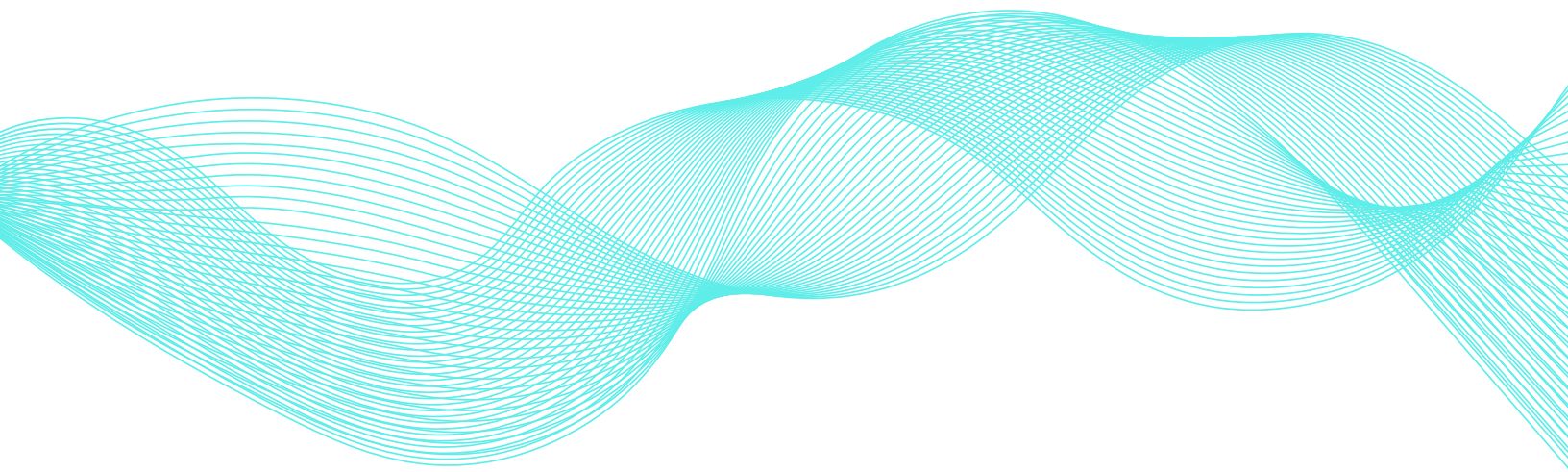
SENATOR CHUCK SCHUMER

Senator Schumer leads the Senate's Security, Accountability, Foundations, Explain (SAFE) Innovation initiative drawing on the perspectives of AI industry experts to harness AI's potential and protect our society from its potential harms.

DR. MICHAEL HAYDUK

DEPUTY DIRECTOR, INFORMATION DIRECTORATE
AIR FORCE RESEARCH LABORATORY

Dr. Michael J. Hayduk is the Deputy Director, Information Directorate, Air Force Research Laboratory, Rome, New York. The directorate's mission is to lead the development and integration of Air Force warfighting information technologies for Command, Control, Communications, Computers, Intelligence, and Cyber.



ESTEAMED SPEAKERS SERIES

DR. BILL DAGGETT

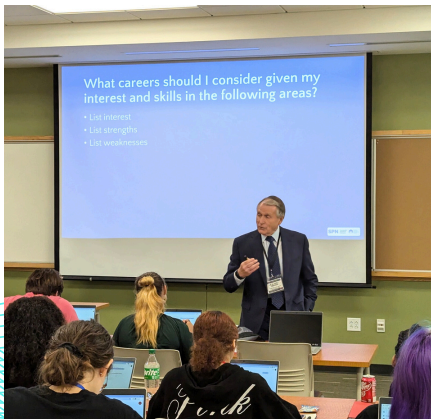
AUTHOR, SCIENTIST AT CARNEGIE INSTITUTION'S GEOPHYSICAL LABORATORY AND GEORGE MASON UNIVERSITY

Bill Daggett is the founder of both the Successful Practices Network and the International Center for Leadership in Education. He recently co-chaired the AASA LEARNING 2025: National Commission for Student-Centered, Equity-Focused, Future-Driven Education and is now leading the National Demonstration Network for AASA.

Dr. Daggett is recognized worldwide for his proven ability to move Pre-K-12 education systems towards more rigorous and relevant skills and knowledge for all students. For 30 years, he has crisscrossed our nation, as well as the industrialized world, to lead school reform efforts to effectively prepare students for their future.

While an avid supporter of public education, he also challenges all of us to be more focused on our children's future than on maintaining the schools of our youth. His insights and leadership have caused nearly every major education association in the country, hundreds of school districts, numerous political and business leaders, publishers, and others to seek out his advice and guidance.

During the keynote speech Dr. Daggett shared the dramatic and rapidly evolving impact AI is having on the workplace. Fundamental changes in the ways businesses operate are leading to a major shift in the skills, knowledge, and dispositions that employees must need to have to thrive in their jobs. Dr. Daggett informed our scholars that students, too, will need to develop these skill sets to be prepared for success in all aspects of life, work, and society.

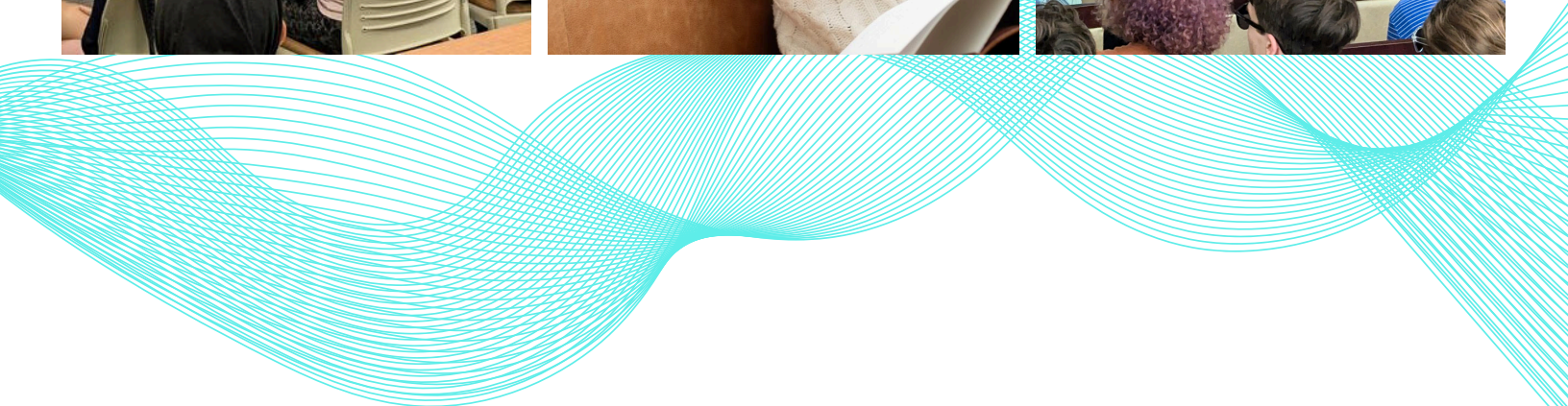


ESTEAMED SPEAKERS SERIES

KAY FIRTH-BUTTERFIELD

CEO, GOOD TECH ADVISORY, TIME 100 IMPACT AWARDEE 2024,
FORMER HEAD OF AI AT THE WORLD ECONOMIC FORUM AND
WORLD'S FIRST CHIEF AI ETHICS OFFICER

Kay Firth-Butterfield is the CEO of Good Tech Advisory. TIME 100 Impact Awardee 2024. She was the Inaugural and former Head of Artificial Intelligence and a member of the Executive Committee at the World Economic Forum and, in 2014, became the World's first Chief AI Ethics Officer. She is one of the foremost experts in the world on the governance of AI. Kay is a Barrister, former Judge and Professor, technologist, and entrepreneur who has an abiding interest in how humanity can equitably benefit from new technologies, especially AI. She became the world's first Chief AI Ethics officer in 2014. Kay is a Senior Research Fellow at the University of Texas and the author of books on Human Rights, AI, and Modern Slavery. Kay was vice-chair of the ground-breaking IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems and was part of the group that met at Asilomar to create the Asilomar AI Ethical Principles.

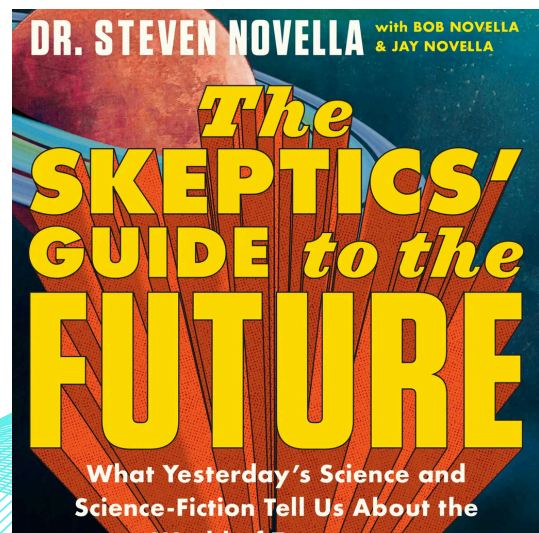


ESTEAMED SPEAKERS SERIES

DR. STEVEN NOVELLA

CASSOCIATE PROFESSOR OF NEUROLOGY, SCIENCE COMMUNICATOR & BESTSELLING AUTHOR

Dr. Steven Novella is an academic clinical neurologist at Yale University School of Medicine and is host and producer of "The Skeptics' Guide to the Universe" (SGU). He also co-hosts "Alpha Quadrant 6," a science-fiction review show. He is the author of the bestselling book *The Skeptics Guide to the Universe: How to Know What's Really Real in a World Increasingly Full of Fake*. Dr. Novella has made multiple appearances on NPR's *All Things Considered* and is a frequent guest on radio talk shows and science podcasts. His television credits include *The Dr. Oz Show*, *Penn & Teller Bullsh*t*, *20/20*, *Inside Edition*, *The History Channel*, *The Unexplained on A&E*, *Ricki Lake*, and *Exploring the Unknown*. When not podcasting, he also authors the popular and award-winning *NeuroLogica* blog and is senior editor of *Science-Based Medicine*, an influential medical blog dedicated to issues of science and medicine. Dr. Novella is the founder and president of the *New England Skeptical Society*, a fellow of the *Committee for Skeptical Inquiry (CSI)*, and founding chairman of the *Institute for Science in Medicine*.



ESTEAMED SPEAKERS SERIES

WALKER SMITH & JORDAN WIRFS-BROCK

DARING DATA: BRINGING DATA TO LIFE THROUGH IMMERSIVE,
PARTICIPATORY PERFORMANCES

In a world where we are constantly bombarded by data streams, how can we understand and relate to such data on a deeply human level?

Walker Smith and Jordan Wirfs-Brock are researchers who bring data to life on the stage—using chemical data to compose ‘Helium Dance Parties’ or turning audiences into a collaborative chorus singing air quality data. In this show, they introduce Data Performances, an emergent immersive genre that extends data storytelling into participatory experiences.

Walker Smith is a ‘Musical Chemist,’ currently pursuing a Ph.D. in Computer Music at Stanford University. He received dual bachelor’s degrees in music composition and chemistry from Indiana University Bloomington, where he combined his interests to create “The Sound of Molecules,” an immersive music/science show that guides audiences on a “sonic tour of the molecular world.” He received a 2023-24 Fulbright Grant to continue his research at the Royal Conservatory of the Hague in the Netherlands, where he developed a sequel show titled “Orchestra of the Elements.”

Jordan Wirfs-Brock is an assistant professor of computer science at Whitman College in Walla Walla, WA. Her research explores how to bring data into our everyday lives as a creative material by developing data experiences that engage all of our senses, especially sound. She has also researched using data that streaming services log about us as a design resource, crafting with sound and yarn as a collaborative sensemaking activity around personal data, and how people access news and information across various technologies. Jordan came to computer science from a meandering path that included stints as an aerospace engineer, a high school teacher, a civic technologist, and a data journalist covering the energy industry.



ESTEAMED SPEAKERS SERIES

PETER BOIE

Engineering Wonder
A STEM INFUSED EDUCATIONAL MAGIC SHOW

Peter Boie started learning magic at the age of eleven when he checked out a magic book from his local library. His natural curiosity for secret knowledge, and aptitude for creating miracles with humble materials launched him into a career as a touring magician.

Peter has found another passion creating fun and creative electronics projects that he shares on YouTube.

Engineering Wonder is the result of combining magic and electronics into one spellbinding educational show. Behind it all is a desire to spread the spark of curiosity and creativity to young people. Creating with electronics has never been more accessible than it is today, you just need to know where to take your first step.

For some that first step may begin with seeing the Engineering Wonder show.



"You never know what will spark a young person's curiosity. If I can inspire young people to get excited about creating things with electronics then that would be a very fulfilling future for me."

-Peter Boie

EXAMPLES OF WORKSHOPS



WHAT IS IN THE BLACKBOX AND HOW DOES IT WORK?

Dr. Jithin Jagannath - ANDRO Computational Solutions, LLC

Dr. Jithin Jagannath, Director of the Marconi-Rosenblatt AI/ML Laboratory at ANDRO led scholars into artificial intelligence and machine learning principles, real-world applications, and ethical considerations. Scholars learned to understand AI algorithms, their impact, and how they function.



EXPLORING CHATGPT

Claire Ehrlich & Dr. Shahida Dar - Mohawk Valley Community College

Participants in the workshop learned about ChatGPT's fundamentals, technology based on the GPT model, and practical examples of its applications in enhancing interactions and automating responses across industries. Live demonstrations showcased ChatGPT's ability to generate human-like text responses.



NAVIGATING ETHICAL CHALLENGES

Kevin Morrisroe, Math & Ethics Teacher, Notre Dame High School

Participants explored the ethical dimensions of AI, learning about responsible development and the Tenets of Humane Technology. This session was essential for those interested in the intersection of technology and ethics, offering insights to shape AI's future positively.



WHO WOULD EVER WANT A ROBOT DOG?

Dr. Dave DeProspero- Air Force Research Laboratory

Scholars explored Fluffy, a robotic dog, and an AFRL HUMVEE. They learned about Fluffy's engineering, technology, and applications in military operations. Participants witnessed a live demonstration of Fluffy's capabilities and discovered the broader implications of robotic technology.



THE STRUGGLE IS REAL

Rachelle Guitian - Smart Carriers & Tamalin Martin - The Project Fibonacci[®] Foundation, Inc.

This workshop guided scholars on a journey of self-discovery and growth, where discomfort and failure were redefined as essential components of success. In today's fast-paced world, the journey to success is often paved with discomfort, failure, and moments of self-doubt. These do not have to be roadblocks but can be stepping stones to achieving your fullest potential.



UNDERSTANDING THE (HUMAN) WRITING PROCESS

Tim Carter, Poet, Educator, Program Director - YMCA

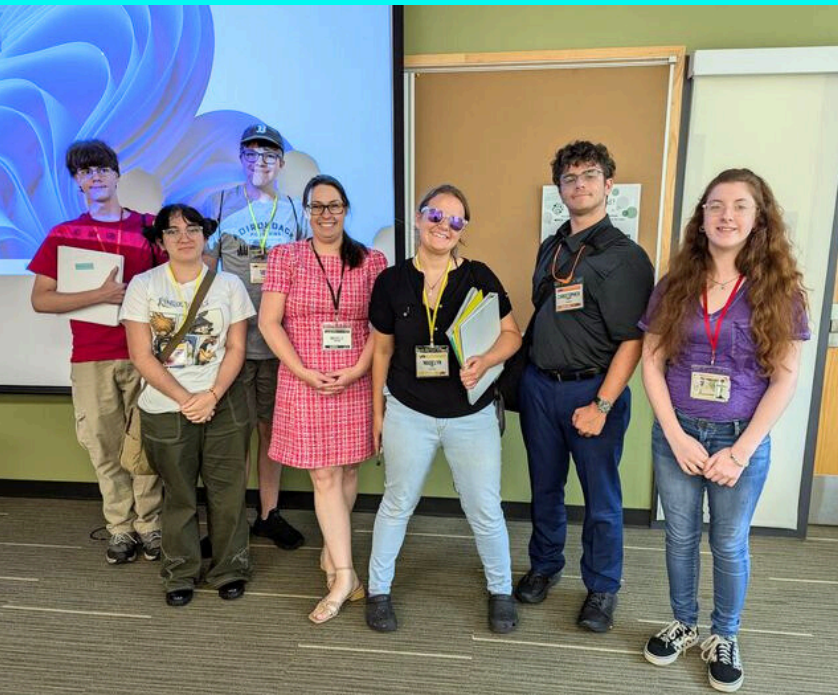
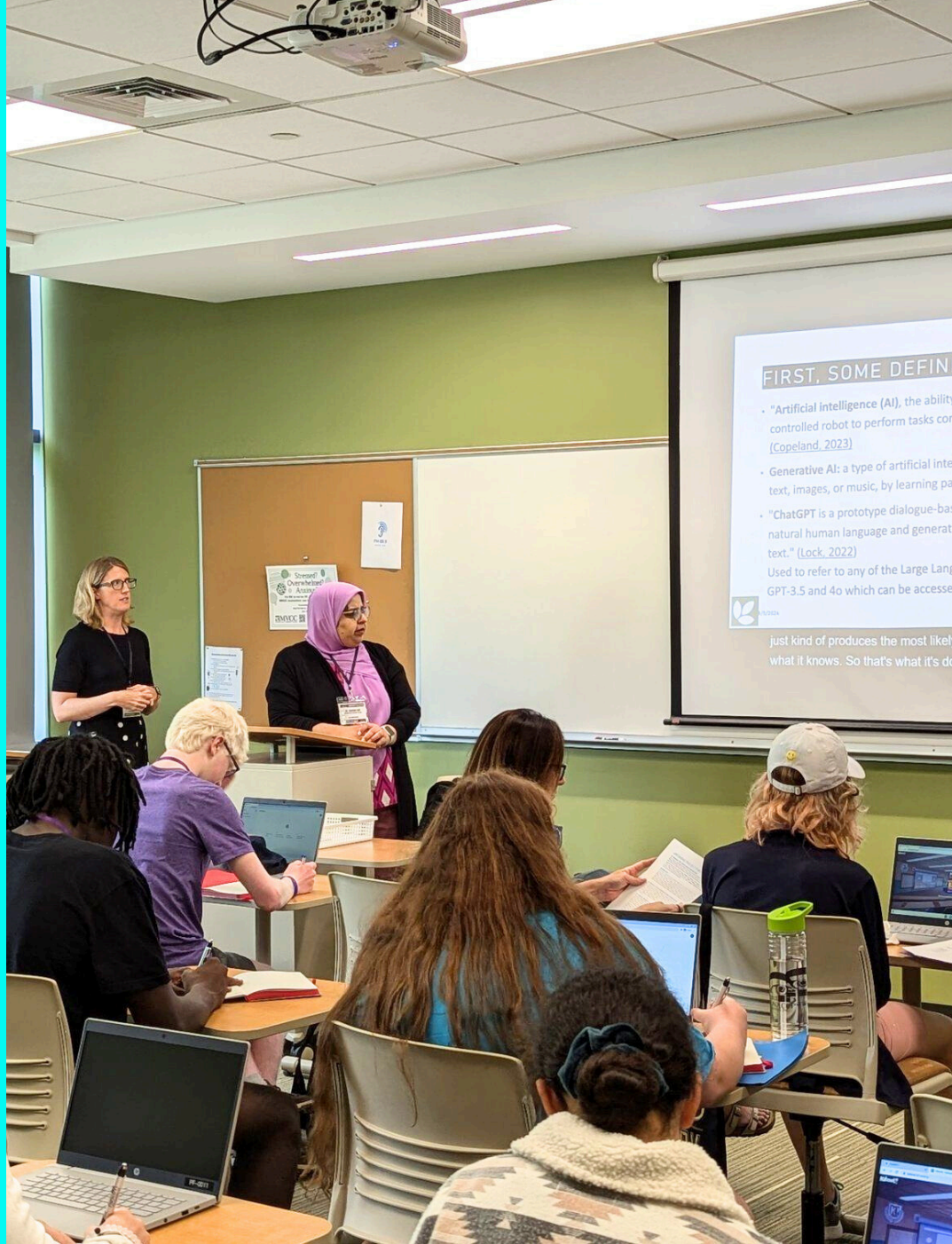
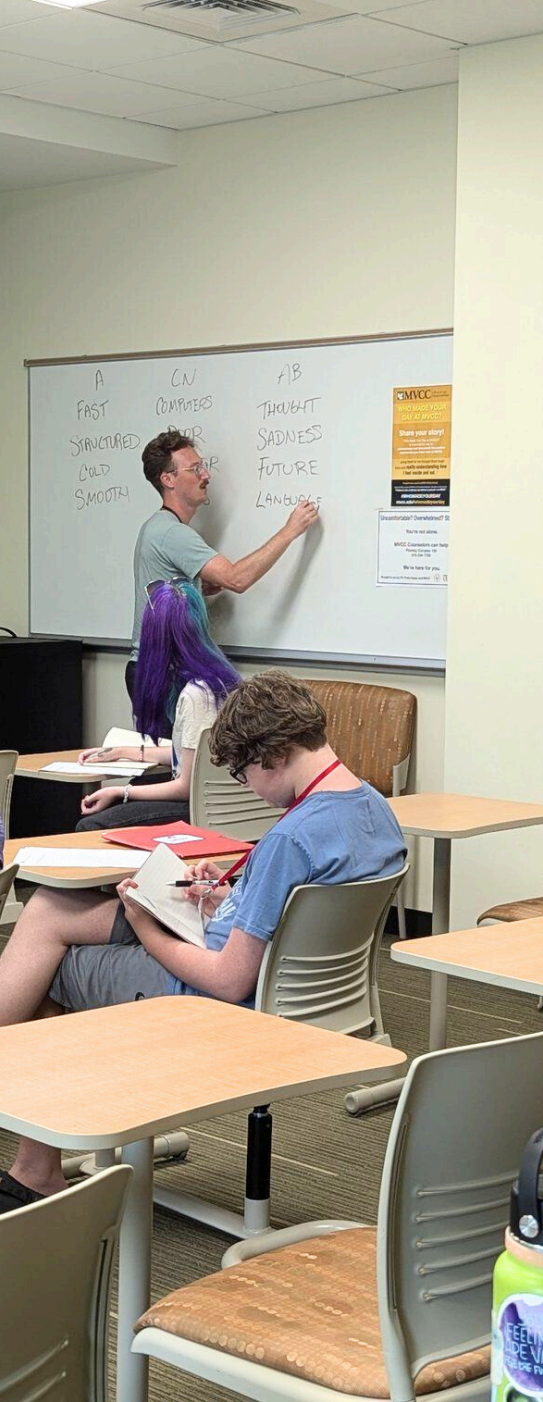
Participants were able to explain how general intelligence machines like Chat GPT work by using relatable metaphors. Scholars learned how to describe the (human) writing process by creating a visual/linguistic diagram. They related the human writing process generally, and specific historical writing movements like Surrealism, to how general intelligence machines work.



MAKE YOUR OWN AI CONSTITUTION

Joseph Rosenbaum - Director of Digital Learning, Technology & Innovation, Yeshiva University

Scholars prepared for the final project of putting AI on trial by exploring ethical, legal, and societal aspects of artificial intelligence. Participants gained insights on AI rights, responsibilities, and regulatory frameworks. They developed critical thinking skills for a trial simulation while shaping AI governance.





EXAMPLES OF WORKSHOPS



COOKIE DECORATING 101

Maggie McGrath - The Sweet Life

During this fun and engaging workshop, participants had the opportunity to unleash their creativity and learn tips and tricks from the talented baker, Maggie McGrath. With her guidance, they were able to experiment with different techniques, colors, and designs to create their very own unique cookie masterpieces.



SCIENCE OF THE PARANORMAL

Richard Nikodem, Peter Leonard, Travis Dean & Kevin Yourdon - Agent Paranormal

Agent Paranormal is a local paranormal team that has investigated haunted locations across the nation. The workshop educated scholars on the protocols and equipment used to investigate the paranormal. The team touched upon technology, gear, and share some of their best evidence.



BARBERSHOP MUSIC & STEAM

Scholars dove into the harmonious world of barbershop music with the engaging Barbershop Music & STEAM Workshop! This workshop provided scholars a unique opportunity to explore the rich history of barbershop singing while delving into the fascinating science of sound. Participants learned about harmonics, dissonance, and consonance, gaining a deeper understanding of how these elements create the distinctive barbershop sound.



UTICA ZOO MOBILE

Scholars joined the Utica Zoo Mobile for an exciting adventure in this workshop! This unique experience brought the wonder of the animal kingdom right to our doorstep. Led by the Utica Zoo's knowledgeable staff, participants had the chance to meet a variety of animals up close. They discovered fascinating facts about their traits, behaviors, and habitats in an engaging, interactive environment.



OPEN AIR SUCCULENT TERRARIUM

Ashley Galligan - Geodesic Love

Scholars joined a hands-on succulent terrarium workshop to design their own personalized miniature garden. Participants chose a succulent, glass dish, and decorations to create a magical ecosystem. They learned essential succulent care tips and received an affirmation card for positivity. This workshop was perfect for adding greenery and creativity to their life.

OFF-SITE TOURS

MASONIC MEDICAL RESEARCH INSTITUTE



MUNSON WILLIAMS PROCTOR ART INSTITUTE



MVCC GAME ART LAB - UTICA CAMPUS









STEAMPUNK TIME TRAVEL ADVENTURE MAKING A STEAM PUNK TIME-O-GRAPH

This one-of-a-kind workshop that combined history, art, engineering, and technology was an amazing trip into Steampunk time travel. Scholars created an experience where you actually got to converse with a historical or fictional figure through AI ChatGPT!

Led by Bruce Rosenbaum, an American artist and designer based out of Palmer, MA. Bruce is known for his work in Steampunk design, both in his home, The Steampunk House, and for what has produced by his company, ModVic. Bruce has been called the 'Steampunk Guru' by the Wall Street Journal and the 'Steampunk Evangelist' by Wired Magazine.



SOCIAL ACTIVITIES



FUEL YOUR FUTURE FAIR



POSTER PRESENTATIONS - FINAL PROJECTS

The 2024 STEAM Leadership Conference was designed to engage young scholars in a critical analysis of AI applications across various sectors. Teams explored, researched, and ultimately debated the merits and drawbacks of a specific AI application of their choosing.

Throughout the conference, each team split into two subgroups. One subgroup argued that their chosen AI application is a beneficial use of technology, while the other critiqued it as a potentially harmful use. Examples of AI applications that could have been selected included but were not limited to, medical radiology, autonomous driving, facial recognition, and personalized education. To aid in their research, scholars had access to tools such as ChatGPT, which provided assistance in gathering relevant information and perspectives.

The conference culminated in a series of presentations where each team shared their findings and conclusions on stage, using visual aids to reinforce their arguments. They presented both sides of the argument before delivering their final verdict on whether the use of AI in their chosen application is a "Good Use" or "Bad Use." This event not only encouraged critical thinking and public speaking skills but also fostered teamwork and ethical reasoning in the context of cutting-edge technology.



UPCOMING PROJECT FIBONACCI EVENTS

3RD ANNUAL TAP INTO STEAM FUNDRAISER

September 16, 2024 (21+ Event)

Join us for an unforgettable evening at the 3rd Annual Tap Into STEAM Fundraising event hosted by the Project Fibonacci Foundation, Inc. This year, we're teaming up with other local nonprofits to bring a night of fun and entertainment to Copper City Brewing Company, kicking off the Mohawk Valley Gives campaign.

STEAM Scholar parents and community members are invited to come together for an evening filled with live music, delicious food, refreshing cold beer, and a variety of exciting activities. From basket raffles to live auctions, there's something for everyone to enjoy. This is a fantastic opportunity to support local causes while having a great time with friends and family.

GIVING DAY

September 20, 2024

Giving Day, celebrated through Mohawk Valley Gives, is a highly anticipated event dedicated to fostering community support and generosity. This special day, taking place on September 20th, provides a unique opportunity for individuals to make a significant impact by contributing to our year-round STEAM education initiatives. Every dollar donated helps to inspire and empower the next generation of innovators, thinkers, and leaders in science, technology, engineering, arts, and mathematics. Your contributions, no matter the size, can help sustain and expand these vital programs, ensuring that students have access to the resources and opportunities they need to succeed. Please consider making a donation on Giving Day and be part of a collective effort to enhance educational experiences and drive positive change within the community.

3RD ANNUAL STEAM WOMEN RISING SYMPOSIUM

March 2025

The third annual symposium will feature a diverse lineup of inspiring speakers, hands-on workshops, and networking opportunities designed to empower and uplift the next generation of female innovators. Attendees will have the chance to explore the latest advancements in STEAM and to engage in meaningful discussions about the future of these fields. Whether you are a student eager to learn more about STEAM careers, a teacher looking for new resources to inspire your classroom, or a professional seeking to connect with like-minded individuals, the 2025 Symposium promises to be an unforgettable experience. Join us in celebrating the achievements of women in STEAM and be part of a community dedicated to fostering innovation and inclusivity.

7TH ANNUAL PROJECT FIBONACCI STEAM LEADERSHIP CONFERENCE

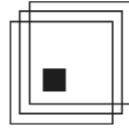
Summer 2025

The Project Fibonacci Foundation, Inc. is excited to announce its tentative theme for the 7th Annual STEAM Leadership Conference, The Science of the Unknown. The conference presents an intriguing exploration into the realms that straddle the borders of science and speculation. The week-long event will be an intellectual deep dive into a series of controversial topics that have perennially fascinated humanity. These topics ranged from the existence of extraterrestrial life and alien encounters to the depths of paranormal phenomena and the varied landscape of pseudo-sciences.

Throughout the conference, students will adopt dual perspectives as both skeptics and believers, a methodology that fosters an environment rich in critical thinking and open-minded debate. This approach enables participants to meticulously gather historical context, conduct forensic analyses, and ultimately, present their findings with a nuanced understanding of the complexities involved in such controversial subjects.

STEAM Scholars will present their outcomes in a manner that highlights not only the facts and figures associated with each topic but also the underlying human fascination with the unknown. These presentations are a testament to the idea that while science seeks to unravel the mysteries of the universe, the journey of exploration and the questions we ask along the way are equally important. In doing so, The Science of the Unknown will provide a valuable platform for future scholars to engage with the unknown, armed with a healthy balance of skepticism and curiosity.

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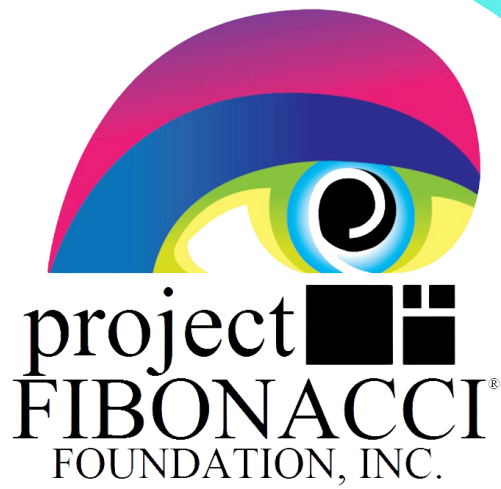


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DOWNLOAD THE 2024 CONFERENCE PROGRAM

